

Fuelling the End of the Fossil Fuel Age

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When the [Stern Review](#) was published in 2006 there were many more climate sceptics around than today. Although they still exist – critically as leaders of nations, notably Bolsonaro and until recently, Trump, across the globe they are outnumbered with, most recently, [China pledging to become carbon neutral before 2060](#).

[Damian Carrington, Environment Editor, The Guardian, neatly categorised climate deniers into four categories – the shill, the grifter, the egomaniac and the ideological fool](#). The shill was portrayed as a paid purveyor of confusion on climate change science or economics; grifters were known for ‘grinding out contrarian articles’, counting clicks and waiting for pay cheques; egomaniacs were projected as tragically disappointed figures, desperate for recognition, with ideological fools, (who could be intelligent), being blinded by their ‘*inane, no-limits version of the free market creed*’.

Climate change, even in 2006, was presented as the greatest example of a market failure witnessed to-date. Stern suggested GDP impacts from global warming could be anything from 5%-20%. He recommended establishing a carbon tax, trading, or regulations, as an essential foundation for climate change policy. In addition, that we spend just 1% of GDP per annum, to contain global warming to levels predicted as manageable, for otherwise climate change, and the likely irreversible impacts associated with business as usual, would threaten the basics elements of life in terms of food, water, health and land use.

On the positive side, Carrington highlighted that since then, every nation in the world had signed up to the 2015 Paris Climate deal, pledging to keep global warming to 1.5 degrees Centigrade and no more than 2 degrees. The Intergovernmental Panel on Climate Change, in bringing together the findings of thousands of climate scientists was, he argued, possibly, ‘*the greatest scientific endeavour in history*’.

Sixteen years after Lord Stern’s seminal report we’ve been struck by Covid-19 which, in reducing UK GDP by 10% in one year alone during 2020 has cost previously unimaginable amounts. The world economy too has slowed over 5% from predicted growth levels for 2020.

But, despite these far lower than normal levels of CO2 emitting activity with greatly reduced transport and industrial outputs, there’s only been a marginal slowing in the overall rise in CO2 concentrations. Temperatures continue to rise even as [UK CO2 emissions have fallen by 29% in the past decade](#), [Met Office readings show the UK’s annual mean temperature has risen 0.52 degrees Celsius over the past two decades](#).

Scientists at the World Meteorological Organisation (WMO), revealed the global average parts per million (ppm), as an indication of CO2’s overall atmospheric abundance in 2019, was 410.5ppm, an increase of 2.6ppm over 2018. This was larger than the increase from 2017 to 2018 and bigger than the average over the past decade.

Referring to the lockdown impact on emissions as a ‘*tiny blip*’, WMO Secretary General, Professor Petteri Taalas said: “*We breached the global threshold of 400 parts per million in 2015, and just four*

years later, we crossed 410 ppm, such a rate of increase has never been seen in the history of our records.”

Over the past decade in my work with manufacturing businesses across the West Midlands, they have been in no doubt about the accelerating impacts of climate change and the need to transition to new energy alternatives.

In September 2017 the **Institute for Design & Economic Acceleration, IDEA**, produced their [Countdown to Brexit report as our contribution to](#) WMCA's Productivity and Skills Commission. Over 50 firms took part in a seminar discussions and a survey concluding that the region should become '*a Silicon Valley for energy entrepreneurship*' and recommending a focus on developing beacon technologies for sustainable transport and the built environment.

Since then, through my role as Co-Chair of the **Green Manufacturing Commission** for [Shadow Mayor, Liam Byrne MP](#), I've been involved in conducting further survey work, zoom workshops and Commission hearings involving over 40 manufacturing firms. It is clear that their commitment to transitioning to low carbon energy has accelerated, but further support is required to fully transition, especially given high UK energy costs compared

with other European competitors.

Many manufacturers are already regularly recycling products and materials, designing for re-use and sourcing as much as they're able to from West Midlands suppliers. However, notions regarding circular economy implementation are proving more of a stretch, with not too many easily able to access renewable energy sources, and few designing or using recyclable packaging or eliminating the use of plastics, with even fewer measuring their carbon footprint from cradle to grave. The phrase 'tailpipe emissions' looks to run the risk of simply off-shoring supply chain carbon inputs, whilst simultaneously seeking to on-shore other supply chain elements.

On the plus side, businesses see '*green manufacturing*' as providing a great opportunity for them, for the region and for their sector. In terms of their state-of-readiness, they are only moderately ready to take advantage of this opportunity, with two thirds of manufacturers seeing a big opportunity for more regional sourcing and selling by the public sector and 76% seeing an even greater opportunity for the private sector.

Barriers to on-shoring are noted as including – a lack of clarity about product availability and competitiveness, as well as a lack of confidence regarding a 'right first time' and 'best in class' cultures when sourcing from regional firms. Having built up a successful track record in successfully sourcing just-in-time from European companies, there is an understandable hesitance to abandon a proven business model.

Manufacturers have indicated three priorities for the region in indicating our intention to prioritise green manufacturing. These include launching a Green Business Hub – promoting regional buying, selling, sourcing and best practice exchange. In addition, a Skills Hub involving West Midlands' schools, colleges and universities and the appointment of a Supply Chain Champion to assist in delivering on-shoring and growing local supply chain capacity are also cited.

Barriers to transitioning to green manufacturing include a lack of readily available funding to transition. Consumers are seen as lacking confidence to purchase more expensive green products. There is a lack of the infrastructure required to support green products, such as electric vehicles, with a lack of market confidence required for investment in next generation green products in

supply chains, in particular as investing ahead of the competition was still not necessarily converting to market advantage.

The five most important things to assist businesses in transitioning to green manufacturing included, vitally, the delivery of low-cost green energy; enabling access to transition funding; providing business incentives such as recognising a 'green premium'; developing a long term, cross party West Midlands Green Industrial Strategy and ensuring greater coordination of business support.

Additional asks included a Mayoral Group to assess how SMEs can transition to green production methods and production whilst continuing to compete with low cost economies, with sector strategies also seen as important in incentivising green mobility, cycling and active mobility opportunities hub.

Towards end March the government produced its [UK Industrial Decarbonisation Strategy](#) setting out a policy framework for the next 30 years for decarbonising industry. This focusses on the infrastructure development required during the 2020s to support market development for low carbon products from the 2030s, largely relying on demand-side policies and attracting private sector investment.

Over £20bn investment is proposed in the period up to 2030 covering:

Significant government investment into industrial infrastructure focussing on large scale Carbon Capture and Storage (CCS) and hydrogen projects in the North and around Irish sea coastal areas (c£2bn)

Subsidies and financial relief for large energy-intensive industries in the same coastal regions (c£5bn)

Exploration of demand-side incentives and policies to build low and zero carbon products with voluntary schemes such as product labelling and standards from 2025 onwards

Continuation of existing schemes such as Climate Change Levy, UK Emissions Trading Scheme and heat networks programmes (HNIP) (£9bn)

Innovation and demonstration funding earmarked for specific heavy industrial sectors such as steelmaking (£250m), nuclear, CCS, hydrogen (£1bn) and coastal clusters (£200m)

General innovation funding to support industrial heat recovery and foundation industries (£100m)

It was constructive to see recognition of the competitive impacts of higher energy costs on British industry with a call for evidence due to be published from 2021. There was a review of policies required to achieve net zero across the 'less energy intensive sites', which includes all industrial

sites across the West Midlands. As the West Midlands does not currently have one of the top 50 sites in the UK for carbon emissions, our entire industrial base is included within the BEIS definition of 'dispersed sites'. This means the strategy positions our region simply to follow the heavy industry clusters, with a 10 year lag. It makes clear that government subsidy will go to coastal industrial regions for the next 5-10 years with around £10bn of direct support and promotion of foreign direct investment targeted at these areas.

"The implication for the West Midlands, not seen as an industrial region by BEIS, is that this strategy will make it harder to attract global industrial investors to our region, particularly given the uncertainty as to whether we will have access to economic green hydrogen or be committed to electricity," stated Matthew Rhodes, Chair, West Midlands Energy Capital.

The fear is that the West Midlands may well be left behind without this vital transition support, especially given the concerns of the region's manufacturers. It is imperative that the region builds on its own co-ordinated energy and industrial strategy – if central government fails to recognise how intimately these are linked, it is up to us to do BEIS's job for them, drawing on our inherent strengths in overcoming emerging competitive walls as we seek to exit the fossil fuel age.